

## What is Web Application?

A web application is a software program that resides on a distant web server but can be accessed on local devices through web browsers to perform tasks over the Internet. It is like a desktop software application but the software application codes are kept at the distant server and it must require a browser to use the application.

## Why develop a Web Application?

There can be a variety of reasons. Here are the major ones

1. Online Services - Build an online software product aiming to sell the benefits to online users
2. Digital Transformation - Transform part of your business to a DevOps backend system
3. Online Selling - Custom application to sell your products on your website
4. Promotion - Custom application to reach internet audiences with promotional target

## Prerequisite for Web Application Development

1. A domain - for example [www.xyz.com](http://www.xyz.com). It helps a user to access the application through a browser. Though in a strict sense we need a URL on a domain as an entry point.
2. A server - The application will reside here. It contains different engines and servers to run the application. Such as scripting engine, web server, database server, file server, mail server, etc. A dedicated server is recommended though it may not be a must.
3. The development team - People who will develop and manage your requirements and convert them into a web-based software application.

## How does a Web Application work?

Typically a web application has two distinct endpoints. The front end, the browser end, and backend, the remote server end. All application codes and resources are kept in the backend server. Users access via frontend. Here is the flow.

1. User request a URL (Web Application page unique address ) through the browser
2. The browser sends a request to the server along with some parameters.
3. The backend takes the request, processes the request and again sends requested data back to the browser - along with frontend scripts that can run on the browsers.
4. The frontend process the data and displays the screen (form or anything) to the user
5. User inputs data, if required, and again sends a request to the backend
6. The backend again process, send back to the browser & the frontend displays the screen as requested
7. This cycle goes on ....

## The Web Application Development Team

You need a team of experts to develop large professional web applications. You should hire resources such that the following roles are played well as applicable.

1. **Product Owner**
2. **Graphics Designer**
3. **Web Developer**
4. **Scrum Master**
5. Test Analyst
6. Tester
7. Database Administrator
8. Server Administrator
9. Data Entry Operator
10. SEO Expert
11. Content Writer

One person can play multiple roles. For a simple web application, you may need just a web developer who can play all the roles. However for a professional web application development, at a minimum, you need a product owner, a scrum master, a developer, and a designer.

## Technology Options for developing a Web Application

1. **Back End Development** - PHP frameworks (Yii/Laravel/Phalcon/Drupal/Codeigniter) or Node.js+Express
2. **Frontend Development** - ReactJS
3. **Backend Database** - PostgreSQL/MySQL/MongoDB

## Web Application Development with LEAN values

A value is something that adds benefit to its final users. The LEAN processes brought a revolution in the manufacturing industry, mainly practiced by Japanese companies like Toyota. They simply maximized the value. DevOps is just the successor of LEAN in the software industry. We follow LEAN, DevOps, and 5S principles and practice accordingly. Here are some principle that we will take care

1. Defining Value & Proper requirement development and management, identify the top 20% features that provide 80% values
2. Identifying value stream - Identifying the associated processes that provide maximum values
3. Creating Flow - Creating effective flow (left to right) by implementing the right system thinking. Eliminate waste - by eliminating clutter, extra processes, 5S practices, etc.
4. Feedback - Establishing a proper feedback system (right to left) from clients to improve product values - through telemetry or other feedback systems
5. Perfection - Identify values from the user's feedbacks and reach perfection through continual learning, experimentation, and improvement.

## Billing Options

1. Hire a team with one more dedicated developer on a monthly billing basis
2. Hire on a fixed cost project basis
3. Part dedicated basis

If the project is to be done on an agile basis you should hire a team to have the freedom to change the requirement based on the feedback.

## How much does it cost?

The cost of course depends on the size and complexity of the project. If fixed cost we will love to give a proposal. We will give the cost for a fixed set of requirements. For monthly billing options, we will charge on the basis of monthly dedicated / hourly rates as applicable. Our cost is almost half in comparison to other companies in India, provided you take the quality into consideration. Please contact us for the best offer.

## Hiring Tips

Preferably, you should hire the developers on a dedicated basis. The rest can be shared resources unless it is a too big project. For a bigger project, you can hire separate backend and frontend developers. For a small or existing project, if your budget is limited, you can simply hire a full stack developer and rest resources on SOS basis so that quality is not compromised.